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LILIUM ELEGANS ATROSANGUINEUM.



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TREE PLANTING is a subject that grows in interest, and demands more attention as the years go by. This is so even in our older settled communities, where, at first glance, one might think that it had already passed to a stage of minor importance. But the plantings of ornamental trees that have already been made are interfered with, more or less, by division of property, changes of ownership, diversion to new purposes, and by many other causes. Then, again, a great part of what has been done is found to be useless, or worse, instead of ornamental. The perception of beauty in trees and tree grouping is a growing taste in the community, and the value of

trees as timber is becoming appreciated as their commercial value in this respect increases. As a direct result of this growing taste and sense of need of more trees, we have the Arbor Day, now established by law in most parts of the country, and this, in its turn, will make the rising generation more enthusiastic in tree culture than have been those which have preceded it. It is not strange, then, that those who are supposed to have some

knowledge of trees are constantly asked to give information about the best trees for shade, the most suitable for a village lot, the best street trees, etc. Let us look at the subject in some of its principal bearings, with the practical end in view of answering the would-be tree planter in such a manner that he may feel assured to accept the advice and be governed by it.

In all the best timbered regions there are parties who make quite a business of taking up young trees from the forest or

forest openings, where they have sprung up naturally, and offering them for sale in the villages and cities. The Soft Maple, *Acer dasycarpum*, the Hard or Sugar Maple, *A. saccharinum*, and the American or White Elm, *Ulmus Americana*, are the species to which the trees mostly belong that are sold in this manner. These trees are usually selected with a diameter of about two to three inches, and a length of twelve to sixteen feet, with two or three branches at the top. They are in this form because they have grown closely together, and on this account they are also usually quite straight. And these very conditions of form and size are their principal recommendations in the eyes of many purchasers. A long, straight, tapering stem, wholly without branch far beyond reach, satisfies the taste of many who would scorn the imputation that their perceptions of tree beauty were crude and undeveloped. Trees that have been procured in the manner described have usually a few coarse roots, and in removal these are cut short, leaving them but little chance to make new roots soon enough to supply the demand that will be made upon them for sap as soon as the leaves push out. A large proportion of these trees will be lost the first year after transplanting. If trees of this kind are wanted, they should be taken up from their native sites and planted out in rows, where they can be cultivated, say for two years, and they will then have formed a large amount of new roots, which will enable them to be finally transplanted with little danger of loss. Trees of this form are suitable for street trees, but not elsewhere. What is wanted on the lawn is a tree with all its branches from base to top, a tree as it would develop naturally from a seed on the spot, and un mutilated by a pruning knife.

People build new houses and move into them, and find that the sun strikes them on every side, and that they have no shade. They are eager for trees to screen them from the rays of heat and bright light, and they are willing to pay liberally for trees that will quickly give them the desired shade. This demand has called out the activities of some tree dealers who go about to find the parties who are anxious to get shade quickly,

and make contracts with them for large trees at five and ten dollars apiece, and agree to plant them. They bring on, in due time, large trees, three or four inches in diameter and twelve or fifteen feet high, which have been taken from the woods or openings, and at the most only about a foot in length of roots. They plant the trees and get the stumped roots out of sight as speedily as possible, and present their bill, collect their money, and are gone. A very small percentage only of such trees ever live, and those that do are years in overcoming the shock of removal. Young, well rooted trees from the nursery transplanted at the same time will surpass them in size before the larger trees that live are ready again to make a vigorous growth. Now, if people will only reflect, they will perceive that, in any case, it must take several years of growth before they can expect to have shade from newly transplanted trees, and if they have shade at all they must, in the meantime, get it in some other way. The best way is from climbing vines, and of all the perennial climbers the quickest of growth and the best for shade is the Virginia Creeper. Other climbers are also good for the purpose of shade, but it takes them longer to reach a suitable size. The various climbers have their good points for beauty and for shade, and in planting them their various merits should be borne in mind. Taking this view of the case, many will probably govern their tree planting somewhat differently, and look more carefully to the final effect and have less in view the purpose of immediate shade.

What species and varieties of trees are most desirable? To answer this question in a general way for a very wide area of this country, it may be said that the Maple is more widely distributed than any other genus, and some species of it flourish almost everywhere. The Sugar Maple extends from a line above Lake Superior to the Gulf of St. Lawrence and south into the Southern States, though not so plentifully in the far south; still, a variety of it, *Floridianum*, grows in middle Florida.

The Ash-leaved Maple, *Acer Negundo*, grows from Lake Winnipeg to Florida.

The Silver-leaved Maple, *Acer dasycarpum*, and the Red Maple, *A. rubrum*,

are found from the southern part of Canada to Florida and Mississippi.

The Striped Maple, or Whistle Wood, *Acer Pennsylvanicum*, and *A. spicatum* are of nearly as wide distribution. When we go to the far west we find there still other species of Maple. The Maple, then, is a family of trees that is suited to our country and its varied climates.

The different species offer a considerable variety in appearance, the variety affecting the general form of the trees, the mode of growth and many and minute details affecting them in their ornamental aspect and their wood for economic purposes. In regard to all these details it is not our present purpose to inquire. But as trees for ornament they are all useful, and in all their variations they are interesting.

Among these different species when cultivated in large quantities in seed beds and nursery rows, there have been noticed and selected a considerable number of interesting varieties, and these have been propagated, until now there is a long list to select from.

The Silver-leaved Maple supplies a number of fine forms, among which may be mentioned the Crisp-leaved, with foliage deeply cut and crimped, a tree of medium size and rather compact growth. The Cut-leaved Silver Maple is another form, having very deeply lobed and cleft leaves. It is of upright habit, and in this respect differs from Wier's Cut-leaved Silver Maple, which has drooping branches. Another variety, called *Lutescens*, has bright yellow leaves, making it valuable to contrast with trees of bright green foliage. There are still other varieties of the same species, and, also, several varieties of the Red Maple.

But we are not obliged to confine ourselves to our native species and varieties, though these are numerous. Europe and Japan supply us with species and varieties that are equally hardy as our native ones, and which are particularly desirable for ornamental planting. Conspicuous among these is the Norway Maple, *Acer platanoides*. This is a remarkably handsome tree, of broad, spreading habit, large, rich, deep green, glossy foliage, somewhat more free of growth than the Sugar Maple, and less so than the Silver Maple, and well adapted for the purpose of shade on the lawn or in the

street. It has large clusters of light straw-colored flowers, which are quite conspicuous and of fine effect. This species has several very interesting varieties, the principal ones being the Curled-leaved, of which the lobes of the leaves curl inwards, giving the tree a distinct and novel appearance; the Cut-leaved, having leaves deeply lobed; Lorberg's, another cut-leaved variety; Reitenbach's, with dark purple leaves; and Schwedler's Norway Maple, having the young leaves a purplish crimson and the older ones a purplish green. A very vigorous growing and admirable variety.

The European Sycamore Maple, *Acer pseudo-platanus*, is a handsome tree, of rapid growth and upright habit, and quite hardy; a fine tree for large places. Of this species there are, also, several excellent varieties, the most prominent of which are the Golden-leaved, the Purple-leaved, the Tricolor-leaved, and Worle's Golden-leaved Sycamore Maple.

The Tartarian Maple, *Acer Tartaricum*, another hardy species, is a tree of medium size. Of this species there are two interesting dwarfish forms and with small leaves; these are a variety called *Ginnala*, and another, *Lemoinei*, both forming handsome small trees.

But besides these the handsome Japan Maple, *Acer polymorphum*, and some of its varieties, especially *Atropurpureum*, with dark purple leaves, can be grown in the milder regions.

Thus it may be seen that we have a wealth of resource for ornamental planting in Maples alone, and some excellent kinds have not been mentioned. To notice in a similarly brief manner the great variety of Ashes, Beeches, Birches, Elms, Oaks, Alders, Chestnuts, Horse Chestnuts, Hornbeams, Catalpas, Magnolias, Lindens, Whitewoods, Willows, Spruces, Pines and Firs, and a multitude of other species, both native and foreign, would require much space. Enough, however, has been said to give a glimpse of the abundance of our arboreal resources.

To conclude; be content to plant trees of medium size; give preference to those that are nursery-grown; select from the many hardy and beautiful kinds those best adapted to your wants and locality; roots are essential to the growth of the trees, and if cut away it will take a long time to produce new ones.

BLUE FLOWERS.

"Give me blue flowers
To grace my bowers,
The perfect color, heaven's own blue."

The absence of blue flowers among floral designs and in our gardens is quite noticeable. The thought seems to be that this color will not harmonize with others, but this plainly shows that it has



PHACELIA CONGESTA.

not been in sufficient use to note its adaptability to nearly all the lighter shades. Nothing could be more harmonious than a few sprays of delicate blue flowers with pink Rose buds, and *Phacelia congesta* with pink *Verbenas* is one of our frequent combinations throughout the season. It is also satisfactory with straw or lemon color, and many pretty arrangements may be made in unison with white. It is one of the favorites on nature's palette as she uses it with lavish hand on the summer skies of June, the blue bird's wing which makes such a bright spot on our landscape in early spring, and by strewing the woods and meadows with flowers of the same hue, which look as if dropped from the blue sky above. What is more pleasing than to find in one of our rambles the blue *Hepaticas* pushing themselves above the brown leaves which have been their protection through the winter, in prophesy of the procession of flowers sure to follow. The *Housatonia cœrulea* which, although it has a dash of white, as one writer says, "cerulean white," has been called *Bluets* so long that it seems as if it should belong to this class, as its botanical name surely entitles it to a place here. It is admired wherever known, in token of which

it has many familiar names, the one of innocence suiting it well, with its fragile plant and dainty flowers. It is almost needless to mention the *Violet*, as its praises have been so often sung by flower-lover and poet. It brings fresh charms each time of its awakening and also many pleasant memories with it. It is a universal favorite, and is always associated with singing birds, running brooks and all springtime delights.

The *Bluebell*, or more properly, *Lungwort*, has been transferred from the woods to many homes where it has easily adapted itself to its abode under the partial shade of some friendly tree, sending forth its pendulous bloom long before many of the more aristocratic flowers deign to appear above ground. It is worthy of any place, and will grace it with beauty, its bells swinging and nodding in the breeze, inviting the honey loving bee to sip of its dewy nectar.

The many varieties of *Speedwell* deserve mention. "The little fairy *Speedwell* with its many eyes of blue."

The *Flax* is a dainty blossom now seldom seen, but a field of it makes a beautiful sight, bringing forcibly to mind the hatchel, the cards, the spinning-wheel and the loom, all of which were necessary to convert the little plant into a useful article.

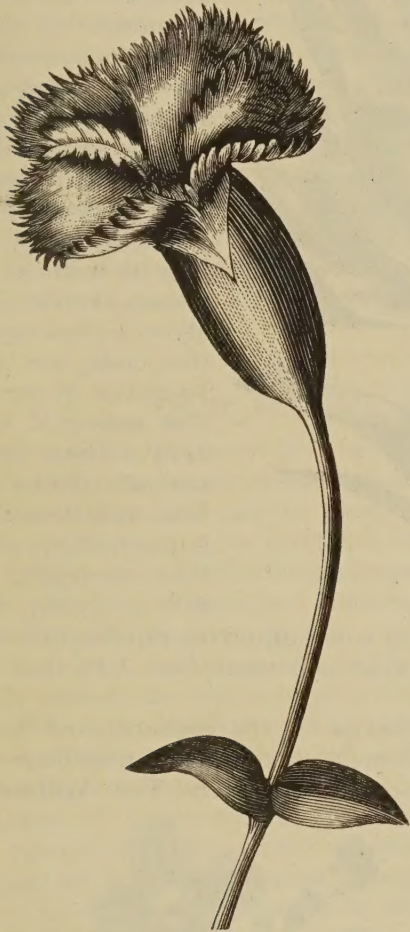
Some of the *Lobelias* are of an intense



LUNGWORT—MERTENSIA VIRGINICA.

blue. The first specimen of which I found on a country roadside opposite some deep, dark woods, and also skirting their edge. It was very near the lake which was in sight and possibly it gath-

ered some of the color from the reflection of its waters, blooming there alone, unsought and where it could not be appreciated. It delighted one person, however, as I eagerly selected some of the best, and arriving home consulted GRAY,



FRINGED GENTIAN.

and then found that my supposition that it was the blue Lobelia to be correct.

Nature seems unwilling to forego the pleasure this color affords, as she grants it to us once after the summer has ended, and when the flowers droop under the frost king's scepter. This offering is the fringed Gentian, to which BRYANT pays tribute,

"Thou blossom bright with autumn dew,
And colored with the heaven's own blue;"

and FLAGG calls it "the last beautiful visitor of our fields," and continues thus: "It begins to unfold itself during the latter part of September, and may often be found in the meadows after the November frosts have seared the verdure of the fields and changed the variegated hues of the forest into one monotonous tinge of brown and purple."

The Cornflower had long been the late Emperor WILHELM's favorite, always having a bouquet of these on his writing desk, and the articles of his room decorated with the design of this flower, until it became a national emblem.

The Periwinkle has adorned country yards for ages, and growing beyond bounds creeps through the fence and into the pathway where it wanders at its own sweet will, escaping cultivation and becoming again a wild flower. It can be made ornamental, however, as we have in mind a plat of it which is kept in a perfect circle around a Pine tree. These combined make the spot evergreen the season round, even in winter when the snow does not cover it, and in the spring the glossy dark leaves, with the new growth of lighter tint interspersed with blue blossoms make a pleasing contrast.

Blue flowers make a desirable show of color in our gardens and surrounding grounds, always appealing with such an innocent look that one cannot help but admire them. The blue Hyacinths add this quality to their delightful fragrance and come so early that they are always gladly welcomed. The Scilla Siberica, with bright blue stars, follows the Crocus. And then there is the Grape Hyacinth, which we were taught to call in our childhood, Infant's Breath, and for which we eagerly sought as soon as the snow was gone with many wondering thoughts suggested by the name.



FORGET-ME-NOT.

There are also the Funkias; *F. Japonica*, with narrow foliage and flowers of a light shade, while *F. cœrulea* has broad leaves and bell-shaped flowers of darker blue. These are both acquisitions to any garden, and make pretty plants for the lawn, nestled among the shrubbery, blooming sometime during the month of August.

Among perennials, also, there is the

Delphiniums which H. H. so charmingly describes gathering among many other beautiful flowers growing so luxuriantly on the banks of Lake Tahoe, and which grew in such masses, kept in motion by the breeze, as to resemble at a distance the blue waters of a lake; these she carried in armsful to the little boat in waiting,



CROCUS.

enjoying them for days after in her rooms. These accommodating plants when once established will propagate themselves by self-sowing and need no especial care, while their graceful spikes prove useful for cutting as well as for masses of color. The *Myosotis* belongs to this class, but may be had in bloom the first season if sown early. These are in several shades of blue, and do well in a moist, shady situation, especially beside a brook. And

in such a spot a few of them were set out, growing and multiplying rapidly, following the brook in its course, which many persons found and transplanted to their distant homes.

The annuals, also, furnish many valuable specimens for the gardener and florist. *Salvia patens* is among these, as besides being cultivated out doors it may be potted in the fall and be a thing of beauty in our living-rooms all winter. The *Ageratums*, also, meet with these requirements, as



SWAN RIVER DAISY.



BROWALLIA.

does *Browallia*, whose flowers are deeper, darker blue. *Agatheæ cœlestis*, which was illustrated in this MAGAZINE for February, 1887, is associated with the *Marguerites*, and will accustom itself to circumstances, blooming freely in winter, or during summer when planted out. This reminds one of the Swan River Daisy, and

the *Nigella*, which has had a place in our garden for years, and the blue flowers encircled with mossy foliage never fails to call forth admiration. *Phacelia congesta* is one of the indispensables which we nor the bees could do without, it being visited by them constantly throughout the summer until frost comes. This being an early bloomer and continuing until the latter part of October, is very desirable for cutting as well as in the garden, as we are always sure of finding it when wanted, and it harmonizes so well with many other colors. It is one of the delicate, unobtrusive flowers which one learns to love, and it always has a wel-

come for you whenever you visit the garden. The *Lobelias* in various shades are comparatively well known, but not so widely grown as they deserve, as the dwarf varieties are very serviceable for edgings or for ribbon beds. And there are many others, both wild and cultivated, of this color, but we have not tried to exhaust the list, only calling attention to a few favorites with which we hope to awaken a new interest in these floral treasures.

"And heaven doth shed on each fair head
A blessing meet, for flowers so sweet
A portion of her glory bright."

EVALYN

OUR NATIVE TREES AND SHRUBS.

The reaction in favor of our native trees and shrubs for ornamental planting, long awaited, seems now to have fairly set in. Subservience to foreign models and foreign ways of thinking, especially on all questions of taste and refinement, was inevitable, so long as the colonial spirit survived; and even when this had greatly abated, the influence of a foreign literature, upon which American readers and students were chiefly dependent, trammelled thought and curbed independence of judgment. Events of the past quarter of a century have altered all this, and we are, perhaps, now, in our extreme Americanism, in danger of resembling the Indian's tree, which "stood up so straight that it leaned a little the other way."

It certainly is a fact that upon this "ar-boreal continent" one must be hard, indeed, to be suited who sends abroad from any sense of need in regard to the material for the decorative planting of lawns, parks or gardens, so far as trees and shrubbery are concerned. This line of thought is awakened, just at this time, by reading a list, lately printed in our State Agricultural Report, of plants native to Vermont. Though one of the smaller States, yet Vermont's area of ten thousand two hundred and twelve square miles includes a great variety of climate, and necessarily, with that, a great variety of plant growth. The list does not claim completeness, but it numbers in all one thousand three hundred and sixty species, of which one hundred and eighty-four species are trees or shrubs.

In the Champlain valley (which, though it is made tributary, by a slight elevation at the wrong end, to the St. Lawrence, is really a natural continuation of the valley of the Hudson) is found the greatest number of all these species, though the Connecticut side, and the independent basin of Lake Memphremagog, each offers important specific additions to the list. Willoughby Lake, tributary to Memphremagog, is especially renowned among lovers of rare plants.

Quite a number of years ago, I set out to adorn my own small lawn with native trees and shrubbery, and although its very dry soil, a sandy knoll, is unfavorable to many species, I was not long in discovering the impossibility of collecting and growing upon a single acre any large proportion of the many interesting species to be found within a very short drive. As to nut trees and shrubs, while in the Champlain valley, and especially upon the lake shores and islands, many Oaks, the Chestnut, several Hickories, the Black Walnut and Butternut, and even the Pecan and the European Walnut, with native and foreign Beeches, may be found growing, yet here I have failed with our single native Oak and Beech, and succeeded only with the Butternut and the two Hazels. Within even the strict limits of my immediate surroundings, however, I am able to produce very interesting effects without a single foreign species; I mean here, of course, foreign to Northeastern Vermont. How much more, then, can this be done where the climate

admits of so much wider choice among native American trees and shrubs, growing wild from the Atlantic to the Pacific, and from the Mexican Gulf to the great lakes. Europe is far less able to do without foreign species than America.

Of course, I am not writing this to discourage persons of sufficient means from purchasing and planting everything in the way of foreign trees and shrubs that interests them. Their experimentation in this line is not only interesting to themselves, but is full of useful lessons to all of us. What I have in mind is to show that the humblest amongst us, who have a little land about their houses, may ornament them from the near woods and even from the roadside, with a practically unlimited variety of trees and shrubs, which are, indeed, often very common, but are yet, in foreign countries, regarded with the same favor which our more wealthy planters have bestowed upon far-fetched and dear bought novelties, still costly to buy, and on the whole less likely to succeed, even with great care, where the natives will grow and thrive as only natives can.

Referring to the list of which I have spoken, let me mention some of the more common and accessible species, suitable for the purpose named. Among the Poplars we have the grand and free-growing Cottonwood, the Balsam or Balm of Gilead, and the Aspen. Among Willows we have, as a tree, the common Black Willow, and as a very beautiful shrub, or small tree, the Shining or Glossy-leaved Willow. If I went abroad for any trees it would be for Willows. The Beech is a noble tree for the lawn, but must be transplanted while quite small, not from the woods, with plenty of roots, carefully set out, mulched and watered. Among the other nut trees the Butternut and Black Walnut transplant easily, and the same may be said of the Red Oak, which is the most desirable northern Oak for the lawn. As shrubs, both the Witch and the common Hazel can be easily moved. The Ironwood, (*Carpinus*) and the Hornbeam, (*Ostrya*) are neat small trees, the last sometimes reaching forty feet in height, though rarely. Its handsome hop-like fruit makes it specially noticeable. The Moosewood, or Wicopy, is a pretty shrub, but thrives only in moist, rich soil. Two very desirable

small trees are the Mountain and the Pennsylvania Maples, which are hardy and thrifty even on dry, poor soils. Two Dogwoods, the Flowering and the Red Osier, are among the best shrubs which grow well almost anywhere. The Black Alder, or Winterberry, (*Ilex verticillata*) though native in swamps, is a shrub which grows well on upland, and its abundant and persistent scarlet berries light up the scene in the midst of snows.

Returning to the trees, it is not necessary to recommend the everywhere planted Elms and Maples. They commend themselves to all of us, and as street or roadside trees none are better. On the lawn, or in the dooryard, they deserve place; but not so exclusively as to forbid a liberal admixture of equally desirable trees. The Birches ought especially to be freely employed. Indeed, I do not know why the noble Canoe Birch, and the equally grand and long-lived Yellow Birch, have been so much neglected. What could be finer than a good bit of straight road, say a half mile, bordered with either, or even with both, of these clean looking, free growing forest monarchs? Especially along our northern boundary, where tree species begin to be thinned out by the severity of winter, should these grand iron-clad forest trees be made more useful for adornment.

When we come to evergreens, I am inclined to place our native White Spruce among the first. It grows thriftily and fast upon the driest and lightest soils, is subject to no diseases, preyed upon by no insects, uninjured by the highest winds. Naturally, its southward range but slightly enters northern New England and New York, and I have even had lumbermen hesitate to name it when I have called their attention to it on my lawn, though some call it "Double Spruce." Its aspect is quite unlike the Black Spruce, the foliage being paler and longer, and standing out more at a right angle, like the Fir. It is decidedly to be preferred to the Norway Spruce, at least far north, and, I think, anywhere. But while I put this first, the less hardy and much slower to get established Hemlock, the most soft and graceful of all evergreens, must at least have second place. Third, I would place the White Pine, and certainly would not exclude the rigid

Pitch Pine. If you have the White Spruce, you will not care for Firs ; but as a deciduous Conifer we cannot overlook our spiring Tamarack, the American Larch.

I have hardly named a tithe of the re-

sources of our native woods for varied planting about our rural homes, but if my readers will even go thus far with me in practice, they will most of them find new pleasures attending them on the way.

T. H. HOSKINS, M. D., *Orleans Co., Vt.*

THE TREE PEONY.

What should I tell you more of it?
There are so many trees yet,
That I should all encumbered be
Ere I had reckoned every tree.

CHAUCER.

"Good morning, my floral friend," said a cheery voice, saluting Mrs. Browning in her parlor, on a dull May morning, as she sat reclining in her easy chair, not quite asleep, but just hinking about the spring plants. "I hope I've not disturbed your siesta, but if I have, it is the penalty you must expect to pay for being a plant encyclopedia, that is all." Then down she



THE TREE PEONY.

sat, bolt upright in a chair, near the door, as though she was on a business errand and must be brisk about it.

"You are very complimentary, but, pray, what plant can have roused you to the degree of enthusiasm to come out in a cold, early spring day like this, to a napping 'encyclopedia'?"

"It is a good joke to find you napping at this season of the year," said the visitor, "you are not very sound asleep, I'll warrant."

"Oh, well; what door-latch errand is on hand now?"

"Why, this Tree Peony, my man has put on my list of hardies, in parenthesis (must have six), and then added 'Glory of our springs.' What is it? He is so enthusiastic when he likes a plant, I can't trust him."

"It is, indeed, true," said Mrs. Browning, rousing herself, "that *Pæonia Moutan* is the glory of our springs. It is prominent in our cultivated gardens as a low-growing shrub, bearing large and handsome flowers."

"Well," said the visitor, "that is a revelation, indeed; and now the question, why has it not been grown in my garden, if it is so glorious and so desirable?"

"Isn't it a fall list that the gardener gave you?"

"It is," was the reply.

"That, then, is the secret. The plants would have been pretty well established by this time if they had been put in at the time he gave you the list, in September, and by another spring you would have had one or two flowers on each plant."

"I'm provoked with myself," said the visitor, "that I did not ask you before. Do tell me how much space the trees take up, and what the flower is like, and what I'm to expect if I ever get them."

"To begin, then, at the last clause of your remark, if you 'ever get them,' and they get to growing well, you may expect a good deal of gorgeous bloom about this time. Then, to describe the flower, I hold that ocular demonstration is the best description I can give you of that, and we will walk over to my Wardian case and see as fine a flower as can be seen in our part of the country, and I believe anywhere else; it measures ten inches across."

The visitor raised her hands in mute astonishment as she beheld the flower. It had been handed in to Mrs. Browning by a neighbor, and was placed in a vase of water in the case, to preserve it as long as possible.

The two friends now sat down by the case, and Mrs. Browning broke the silence and asked, emphatically:

"Do you know of a flower that blooms before the Roses, that can approach it in size and beauty?"

The visitor did not seem to hear the question, but went on to say :

"That flower looks to be a gorgeous Poppy, with dark red glacé silk petals, and how very striking the purple at the base of the petals—a very expressive flower, I call it."

Then, recollecting herself, replied :

"Oh, no, not at the north."

"Why, it is an alpine plant, of course, at the north," said Mrs. Browning.

"Alpine plant did you say? I did not see it on the Alps when I was there ; but then we did not go in May, and I might not have seen it if it was not in bloom to attract my attention."

Mrs. Browning smilingly explained :

"It was not there to see, for the very reason that it was given to the Chinese, to have and to hold, as their especial flower, and to them only, and until the last century they have been very careful to keep the contract. The English merchants got it, however, and now we've got it in our gardens in variety. The nurserymen can tell you the best varieties. I suppose," continued Mrs. Browning, "that Sir Abraham Hume had the very first one that was imported, at his seat at Wormleybury, England. It is to be found recorded in old books that a plant of Tree Peony was introduced from China by him in 1802, and flowered for the first time in 1806, and that in 1820 it had formed a clump forty feet in circumference and seven feet high. In April it is covered with its splendid flowers. In the last year named it had six hundred and sixty-six flower buds, one hundred and thirty of which were taken off to increase the size of the remaining flowers, and it is believed that, as no root except this one of the Tree Peony had before been imported into England alive, the whole stock in England and America had come from this root. Well, at those 'seats' they have acres to spare, and this being considered a great prize in those days, they gave it the best place, probably had a banquet when it bloomed. You can grow beautiful specimens in quite small gardens, even in pots, if you will believe me, and they force well in cool conservatories, if kept shady so that the buds will not start suddenly into growth. About 1830 Mr. William Lathe, of Cambridgeport, Massachusetts, brought one from England, and had it in a pot,

and kept it in the cellar winters for fear of losing it, and this was the first one in New England.

"The Chinese have forced them for centuries to bloom in all seasons. Travelers tell us of the ill-conditioned sheds they use for the purpose, without glass. The whole Chinese race are utilitarians, and have brought to perfection many new kinds. They throw the potted plants away after blooming, as they think they do not bloom well the second time. I suppose the roots are well pinched to make them bloom."

"Now," said the visitor, "do tell me on what mountains in China those wonderfully beautiful plants first grew. Was it the Garden of Eden, do you think?"

"No," said Mrs. Browning, "I think not. I never thought John looked like Adam, but he might have been for all that. These handsome shrubs were found growing wild on the mountains in the Province of Honam, and were cultivated in the Imperial Gardens of Kai-fong-fou, in Honam, in the north of China. They are sent to Peking, Canton, Nankin, and from China introduced to Japan. At the time the East Indian trade opened the ports, about 1800, the English saw the flowers on their porcelains, paper hangings, and in their paintings bearing early dates, as the tree is of great antiquity. Perhaps Adam 'tended them,' who knows? As you say, they may have been in the first garden. Be that as it may, it was a matter of curiosity to see the growing plants, and then to possess them and take them back to England. After some unfortunate attempts to convey the plants alive to England, Sir Abraham Hume's tree proved to be the successful one."

"Do the plants require a particular soil?"

"A rather heavy soil is best, but the plants will thrive in any good garden soil. Those curious Chinese have a way of propagating the tree that I call a massacre. They will take an old plant and split the stems into four parts (they call the process 'division of the stem'), down among the roots. They keep these divisions separated until the wounds begin to dry, when the middle of the stem is filled with a sort of plaster, made with mortar and rich earth, with which is mixed a small quantity of sulphur. It is done in the spring, and in the autumn they sepa-

rate the divisions with a portion of the root belonging to it. The autumn is really the best time to plant them."

"Is this plant, in your neighbor's garden, one of the original species?"

"Perhaps not, but it is not far removed from it. It is called Purple Tree Peony, variety *Papaveracæa*, and is sufficiently near the original to be considered a type of the species, because it is single flowered. On account of our cold, rainy spring it is inclined to be semi-double. My neighbor's plant has become well established, and this is the largest flower he has ever sent me. Those yellow anthers against the purple stain of the petals give the flower such a cheerful look. It cured me of a dull day when it was handed in."

"Oh," and the visitor started back, as she exclaimed, "did I move the case? The flower has fallen to pieces; it is all gone, except a green bunch, too bad, too bad!"

"I think its time had come," and Mrs. Browning put her hand in the case and took out what her visitor called a green bunch, and said, "these are the seed vessels. It is true the appearance of the Peony is all gone, and here is that of the Poppy. It is not the appearance of the flower that gives the name *Papaveracæa*, but this bunch of seed vessels, and when they are enveloped by their membranous covering they resemble a capsule or seed vessel of the common Poppy."

"I believe," said the visitor, "you know that flower through and through, and that your advice can be trusted. I'm going now, and will have some of the plants of my own."

"If you do raise a Tree Peony," said Mrs. Browning, "you will also have the largest Poppy on record. Success to you, my friend."

MARY EASTERBROOK BLAISDELL.

THE CALLIOPSIS.

The several species and varieties of *Calliopsis* form, when taken together, a very useful and brilliant group of hardy annual plants, belonging to the natural order *Compositæ*.

They are plants growing from one to two feet in height, and, although of slender habit, are of vigorous growth, and their flowers, which are produced in the greatest profusion on slender foot-stalks, embrace every shade of yellow, crimson and brown, some varieties being beautifully marked.

Few, if any, annuals are more useful for cutting than these, their colors being so rich and striking. All of them are fine bedding plants, the dwarf-growing varieties make splendid edging plants, while both the tall and dwarf produce the finest effect when grown in groups in the mixed border.

The *Calliopsis* will produce the most satisfactory results when given a deep, well enriched soil and a sunny situation, and in order to give the plants an opportunity to develop themselves they should be placed not less than one foot apart. In order to secure a succession of bloom two sowings are necessary. The first to secure a display of flowers from May to July, should be made early in September. Sow the seed in rows in a nicely pre-

pared border, cover slightly, and when the plants are up thin out or transplant them, if necessary, so that they shall stand three or four inches apart each way. Keep clear of weeds until cold weather sets in, when they should be covered with evergreen branches. This covering should be removed early in the spring, and the plants removed to the place where it is intended they should bloom as soon as the ground is in a proper condition for transplanting.

The second sowing for a succession of later bloom, first should be made in a cold-frame, placed on a nicely prepared border about the middle of April. The seed should be sown in the same manner, and the young plants treated precisely as advised for the first sowing, but great care should be taken to grow them on in a cool temperature and air freely given, in order to prevent them from becoming drawn. They can be planted out as soon as they are strong enough to handle. If the seed pods are kept picked off as soon as they show themselves the plants will remain a much longer time in bloom, and the individual flowers will be much larger.

The following descriptive list embraces the most desirable varieties:

Calliopsis Atkinsoniana. A native of

Columbia, growing about two and one-half feet in height, and having yellow and crimson flowers.

C. bicolor (tinctoria). A native of Arkansas, growing from two to three feet in height; flowers yellow, with a brown center.

C. bicolor (tinctoria) marmorata nana. A garden variety growing about one and one-half feet in height. The flowers are irregularly marked with crimson, brown and yellow.

C. bicolor (tinctoria) nigra speciosa. Another garden variety, growing about two feet in height, and having flowers of a rich velvety crimson color.

C. Burridgii (Cosmidium Burridgii). This is one of the most handsome of the tribe, the large blossoms being of a deep crimson-copper, broadly margined with gold. It grows about two feet in height.

C. coronatus. A very handsome species, growing about two feet in height. Flowers rich yellow with a circle of rich crimson spots near the disc. A native of Texas.

C. Drummondii (Drummond's Coreopsis). A dwarf growing, free flowering species, attaining a height of eighteen inches. Flowers of a bright yellow color.

CHAS. E. PARNELL, *Queens, N. Y.*

PLUMBAGO CAPENSIS.

Our modern floral publications teem with dissertations on the charms and virtues of that universal favorite, the Geranium, or, botanically speaking, the Pelargonium. Descriptions of the beauty and desirability of the Rose abound, and praises of the Begonia are chanted by the florist, both professional and amateur. The Chinese Primrose, that queen of winter blooming plants, to which even the Geranium must "yield the palm," and that royal beauty, the Gloxinia, which completes the floral chain of the year, making the window or conservatory a vision of loveliness, while the Primrose takes her well earned rest, are at last gaining that attention which their merits deserve. Cacti, Chrysanthemums, Fuchsias, and other well known house plants have each their admirers and champions who take up the pen in their defence; but is it not strange that amid all these flowery discourses one scarcely sees an allusion to the *Plumbago Capensis*, although it is quite as desirable as many, if not most, of the foregoing aforementioned plants.

Judging from the articles written by amateurs, which rarely contain any reference to this charming flower, one is led to believe that it is not often included in collections of house plants, but either used for bedding out or turned over to the skill of the professional gardener. Surely, if the good qualities of this beautiful flower were better known it would be more generally cultivated. One strong point in its favor, and one which

must commend it to those who are compelled to keep their plants in a dry atmosphere, is that it bids defiance to the "pestilence that walketh in darkness" and "the destruction that wasteth at noonday"—the red spider. This fact, although an important one, as any person who has ever wrestled in vain with that minute atom of total depravity will admit, is but one of its many good qualities.

The flowers, which are borne on spikes, are of an exquisite and peculiar shade of light blue, bearing some resemblance in form to those of the Perennial Phlox, but are far lighter and more graceful; a spike of these delicate blossoms looking at a short distance not unlike an ostrich plume.

My first experience with this most satisfactory plant occurred during the past year. Procuring a specimen in spring or early summer, I submitted it to that systematic abuse which all my plants, "irrespective of age" or condition receive, and instead of bedding it out, I installed it in a small pot and kept it in the bay window during the heated term. It soon began to put forth flowers, and with the exception of a short period of rest I think the plant was in bloom continuously until October, or thereabout, and that, too, without even the benediction of a shower.

The result of my treatment leads me to put implicit faith in the suitability of this bright and pretty shrub, for the foliage is also satisfactory, for culture in the dry air of the living-room, having given its

endurance a very severe test. Its immunity from red spider should induce those to add it to their collections who cannot shower their plants frequently, for there are many women who are very fond of flowers and yet are unable to make a procession of themselves for the space of an hour or two every day, carrying their beloved plants to the sink or out of doors

to drench them with water, and then bring them back to reinstate them in their places. To such people I can conscientiously recommend the *Plumbago Capensis* as being in every way suited to their needs, combining, as it does, ease of culture with beauty and abundance of bloom.

MRS. LUNEY, *Hoosic, N. Y.*

SCHOOL LESSONS IN PLANT CULTURE.

Our horticultural and agricultural papers, now so numerous, advocate in frequent articles the policy of instilling at an early age a saving taste for plant culture and folial adornment, by decorating school grounds with choice trees, vines and flowers; and adding to this some actual instruction in the growth of plants. In the older countries such school privileges are common, and most so where the soil is scantiest and least productive, as in Sweden and Switzerland. Naturally the need of skill and interest in the processes of soil-culture are more felt in such territories, than where, as with us, an immense area of virgin soil, not only gives ourselves copious abundance so long as the fresh source continues, but makes us the cynosure of all the hungry millions everywhere.

But the circumstances will not remain as they are now, and foresight should prevent us from being the last to secure to those who follow us, the ability and the means of making good use of whatever portion and quality of soil each individual may become an occupant of.

There are some difficulties in the way of establishing school gardens here which exist less in Europe. There, a teacher, once in office, usually holds the position permanently, having a residence within the school enclosure; and very young teachers are generally found only as assistants. Here we have more change, and our schools are open during the inclement season, when a shroud of snow covers the soil, or frost locks it up. In the summer time when plants, and weeds too,

grow rampant, schools are often closed, and the grounds in no one's special charge. Even when schools continue open during the season of growth it is not easy to give lessons or illustrations in out-door beds, when there is but one kind of soil to be seen, and where the weather and the position of the plants often prevent the close examination which can be given to soil, seeds and plants in pots upon a window frame.

In the window the teacher can place just what will serve to illustrate the intended lesson, where it can be thoroughly examined, and well seen and remembered by all the pupils, and nothing need interfere with a systematic course of lessons, beginning with soils, then taking seeds, cuttings, grafts, etc., and later the phases of growth, and how it is influenced by conditions and processes.

With this basis of fundamental principles, and the lively interest which its early attainment would secure, a further private study of any special branch of culture would be easy, being cleared of any misleading preconceptions. Learners desiring at any time to enter upon any branch of agricultural practice could do so clear-sightedly, and with rational hope and prospect of success. It is strongly felt that industry as well as intelligence should be made part of the public school training. The culture of the soil is the only industry that everyone needs to know something of, and the only one that is fully adapted for the schools which are intended for the common equal good of all.

W.



FOREIGN NOTES.

THE SHIRLEY POPPY.

The story of the origin of this very handsome strain of Poppies, that has recently appeared, is thus told by the originator, W. WILKS, in the *Gardeners' Chronicle* :

In the summer of, I think, 1879 or 1880, I noticed in a wilderness corner of my garden, among a patch of field Poppies, one bloom with a narrow white edge. I marked it with a bit of wool, and saved the seed capsule. The seed was sown the next year, and I obtained varieties with deeper white edges, and some of a paler scarlet color. Of these I marked and kept the best. The next year the flowers got still paler colors and wider white edges. In 1883 I began to see that the presence of black, either at the base of the petals or in the stamens, was a great disfigurement. I therefore pulled up and destroyed every plant having black in it, and in order to get the black out of the strain I used to get up a few minutes before the bees were about (4 A. M.); and have continued this work of selecting the most beautiful flowers for seed, and have ruthlessly destroyed all plants which showed even a symptom of black, however lovely they might otherwise be. This absence of black blood it is which gives my strain of the Poppies their wonderfully light, bright, tissue-paper-like appearance, and constitutes the whole and sole merit of the strain. I now get very few rogues, but still every year one or two will run back to the old black blood, and nothing but patient perseverance in destroying them will keep the strain pure.

The colors go from absolute white with yellowish stamens through pink of all shades, to glowing scarlet—but a scarlet without black. Some are red with white edges, others white with red edges; and a few come veined and streaked from the center toward the edges. I am now trying to increase the proportion of those veined and flaked varieties, but my great ambition is some day to get a yellow *Papaver Rhæas*. A pure white *P. Rhæas* was found last year wild in a cornfield

near Lowestoft. I have tried hybridizing with yellow nudicaule, but hitherto with, I think, no success. I say, I think, because I obtained last year some distinct salmon-colored ones, and this may be due to yellow nudicaule influence, but I think it is not. I saved all the seed I could of these salmon shades, and this year I hope to have the color still more decided.

Every plant that gives a single black-blooded flower should be destroyed.

OIL AND SULPHUR FOR MILDEW.

In a late number of the *Journal of Horticulture*, THOMAS MEEHAN confirms the published statement of Mr. A. VEITCH, of New Haven, in regard to the use of oil in plant houses to prevent and destroy mildew. Mr. VEITCH's account of this method was sent to Mr. MEEHAN, then editor of the *Gardeners' Monthly*, about the time that periodical ceased publication on account of the death of its proprietor. Mr. V.'s statement finally came to the public through the journal first named, and is to the effect that a paint of linseed oil and sulphur on the hot-water pipes is a remedy against mildew. Mr. MEEHAN says: "That it is a simple and certain remedy I can vouch for. I have seen it tried over and over again, and have no hesitation in saying that it not only prevents mildew from appearing in a plant house, but will speedily stop its progress after it commences its ravages."

FREESIAS IN BLOOM.

These charming and very fragrant plants should become the most popular subjects that we have for the embellishment of the greenhouse during the early months of the year. During the last two or three years large quantities have been imported into this country from the Cape of Good Hope. They are generally very fine bulbs, and will bloom freely if potted in good open soil as soon as received—that is, if they come to hand about August, which is the usual season. When potted the temperature of a greenhouse

is quite sufficient for them, and after the plants make their appearance above ground they must be kept in a position well exposed to the light, otherwise the foliage will become drawn and weak. Freesias are readily forced, but, in common with many other subjects, so treated, they must not be shifted into a warmer structure till they have made a certain amount of progress, as if forcing is attempted directly they are potted it will end in failure.

H. P., in *The Garden*.

POULTRY MANURE.

As nearly every estate has a poultry house, and the question is being frequently asked as to the value of manure, it may not be without interest to consider some recent analyses with which we have been furnished. The excrement of fowls is one of the most invigorating fertilizers, and is worthy of greater consideration than is often bestowed upon its collection. The difference between the excrements of fowls and that of cattle is that the former contains in solid form all the fertilizing ingredients of the food except what is retained in the body for growth or goes into the eggs; while a very considerable portion of the fertilizing value of the food of cattle is excreted in liquid form, and is easily lost even in the stalls and farm enclosures. The following table gives the comparative value of one ton of poultry manure and one ton of an average mixture of horse, cow and pig manure, giving four of the most important manurial constituents:

Selected Chemical Constituents in one ton of Poultry Manure and one ton of Cattle Manure, in pounds.

	Phosphoric			
	Nitrogen.	Potash.	Acid.	Lime.
	lbs.	lbs.	lbs.	lbs.
Poultry manure . .	29	14	20	47
Cattle manure . .	12	11	8	16
Poultry in excess of cattle manure . .	17	3	12	31

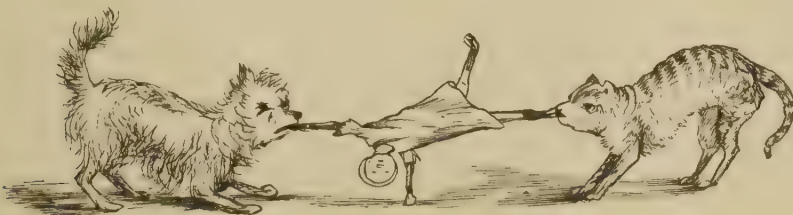
These results show that poultry ma-

nure contains more than double as much nitrogen, two and a half times as much phosphoric acid, a little more potash, and three times as much lime as cattle manure; and it is easy to see why the dung of fowls is the richest manure. The food of fowls is very concentrated, and consists chiefly of grain, insects and worms, and the dung contains both the urinary and bowel excretions. On the other hand, cattle consume immense quantities of woody fiber in their food, and their excrements accordingly consist largely of undigested fiber, with what of the urine may have been absorbed and retained by it. Poultry manure, being so concentrated a fertilizer, and coming quickly into action as plant food, should be applied only in moderate quantities at a time, and not be dug too deeply into the soil. It may be mixed with charcoal dust, soot or cinder siftings, and applied with great advantage to vine borders and Rose trees. It forms a capital dressing for lawns and pleasure grounds, especially those infested with moss. In all cases it should be rendered small by breaking up and sifting previous to use. In France poultry manure is extensively used as a manurial dressing to Orange, Mulberry and Olive trees; and in Belgium it is used as a manure for the Flax crop. J. J. W., in *Gardeners' Chronicle*.

LEAVES FOR CHRYSANTHEMUMS.

The leaves of indoor Chrysanthemums are seldom satisfactory, contrasting unfavorably with those grown out of doors, whose foliage is always healthy and of a deep green, or some rich, bronzy color. In arranging the cut flowers one must therefore find a substitute. To accompany the rich yellows, oranges and reds, there is nothing better than small branches of *Berberis aquifolium*; but for white and pink kinds, sprays of *Cineraria maritima* are much to be recommended.

London Garden.



PLEASANT GOSSIP.

THE CRAB APPLE'S ROSES.

In Mrs. ALLISON'S garden, near us, live two discontented Crab Apple trees. They are very fine trees, of a beautiful shape, with drooping limbs. In the spring they are always covered with lovely blossoms, and later loaded with the finest of fruit. As they are on the lawn, in front of the house, they have always been cared for in the best manner, and if they had not been so handsome would long ago have been cut down, for fruit trees are very troublesome on the lawn.

Now, these trees were always very much praised and admired, but that did not satisfy them, and what

first of June, when the Apples were about the size of small marbles, something remarkable happened. In the new growth came a spray of flowers much larger than ordinary Crab Apple blossoms, and as double as Roses. They did not appear in clusters, in the ordinary manner, but when cut off, both in flower and bud and in manner of growth, resembled a branch of Baltimore Belle Roses, and for which it was mistaken by many.

Soon other branches appeared, similar to the first, most of them in the tree containing much fruit, but several in the other. In all there were three or four large sprays, containing from five to nine flowers;



DOUBLE CRAB APPLE BLOSSOMS— $\frac{2}{3}$ NATURAL SIZE.

do you suppose they aspired to be? You never could guess, so I must tell you. They wanted to be Rose bushes. Well, that is, I suppose that was their design; of course, I was not in their confidence and can only judge by their actions. Now I will tell you all I can about them, and you may decide for yourselves.

They are large trees, and have, until this year, behaved pretty much as well conducted Crabs usually do. Last year, the branches swept the ground, so Mr. ALLISON had them very closely pruned. The gardener trimmed them each to a compact, round head. Last spring they blossomed as usual, one of them profusely, the other scantily. The blossoms fell as usual, and as usual, the fruit appeared. About the

then there were several smaller ones with only two or three in each.

The flowers averaged about the size of the Baltimore Belle Roses. They were also very much more fragrant than the ordinary Crab Apple blossoms.

The drawing I send was taken on June ninth, from the last spray that appeared, after it began to wither. The flowers were not so large and perfect as in the first one, and the last buds were opening, so I had no tightly closed ones to copy. They were round and compact, resembling Rose buds.

Now, if these trees, in the language of Mr. DOMBY, by "making an effort," could produce such results, could not other Crab Apples do the same if florists and gardeners would aid them? This Crab

would then, more than ever, deserve its name—"Transcendant."

M. C. S., *St. Johns, Michigan.*

This communication is of interest principally from the fact that it calls attention to the Crabs as ornamental trees. If our correspondent had told us at what time the severe pruning was given to the trees, we should have had all the facts in relation to it necessary to a full understanding of the circumstances under which these trees have produced their double flowers. There is some probability that the pruning was given in the summer before, at the time the "branches swept the ground," and when they were felt to be an annoyance in that condition, and that after that event the trees made a little new growth, or, at least, that the sap was still in motion, and sufficiently so to give the terminal buds the character of fruit or flower buds. That these double flowers should have appeared on the new growth, and after the usual season of blooming, are both statements that one would not have expected; however, without more exact knowledge of the facts, it is best to let them pass without further notice. The pruning must have seriously checked the vigor of the trees.

In reply to the question near the close of the communication, it may be said that there are already a number of varieties of double flowering Crabs in cultivation as ornamental trees, and it may be doing a service to our readers to mention briefly these really fine subjects, which are far less known than they should be.

The double flowered varieties are derived from different species of Crabs. Our cultivated, fruit-bearing Siberian Crabs have come from *Pyrus baccata*, either as direct or hybrid descendants, and from this source has originated *Pyrus baccata carnea pleno*, the double flesh-colored Crab, which ELLWANGER & BARRY describe in their catalogue as having "delicate flesh-colored double flowers." The same authorities describe, also, a considerable number of both single and double flowering varieties cultivated for ornament; and among them are the Chinese Double White-flowering Crab, and the Chinese Double Rose-flowering Crab. The last is described as having "beautiful double, rose-colored, fragrant flowers, nearly two inches in diameter." There is also a semi-double

variety, called *Riversii*, with rose-colored flowers.

There is also a single variety, called the Fragrant Garland-flowering Crab, and having "single blush flowers, with the fragrance of Sweet Violets; blossoms appear about a week after those of the Double Rose-flowering." This variety is derived from our native Wild Crab Tree, *Pyrus coronaria*.

This present spring the announcement is made in the trade of another variety which seems to be burdened with too much name, as, *Malus coronaria*, var. *Halliana*; syn., *Pyrus Malus*, var. *Parkmanii*. But whether *Coronaria* or *Malus*, *Halliana* or *Parkmanii*, it can well be known by the name of Tea Rose Crab, as it appears in the catalogue of JACOB W. MANNING, of Reading, Massachusetts, who describes it as follows: This beautiful, new flowering shrub is one of the finest additions to the list of hardy ornamental plants for many years. It forms a small tree or large shrub of graceful proportions, and with handsome, light green foliage; but its greatest attraction is its wonderfully brilliant flowers. The unopened buds are long, slender and pointed, recalling to mind those of certain Tea Roses, and of a brilliant carmine color of great attractiveness; while the opened flowers are semi-double, and of a lighter shade of carmine than the buds, each flower being about one inch in diameter when expanded. Each flower has a slender stem about three inches long, which is gracefully bent by the weight of the flower; while, as a general thing, five flowers are produced from each bud on the last year's growth, and are produced in such profusion as to gracefully bend the branches. The tree is a native of Japan.

SPRING WORK IN THE GARDEN.

Give nature a little help, and what a wonderful flower garden she will present you with! Cut the dead stalks off the Pæonies, and how quickly the rich bronzy green foliage will take their place; clean the borders, and you will be amply repaid with the gold of the Crocus, the purple of the Hyacinth and the delicate bells of the Snowdrop. I hope everybody has the Grape Hyacinth, *Muscari botryoides*, with its graceful blue bells and musky odor; alternated in bunches with the Daffodil

it is exceedingly showy, and is such a sturdy little flower; stray bulbs that escape in weeding establishing themselves in the grass, by the hedges and everywhere.

If the hot-bed was sowed early, nearly all the plants can be transplanted by the middle of May—in the meantime, there should be careful watering, and watching that Zinnias, Balsams and Ten Weeks Stocks do not become too large, else they will become spindling and produce inferior flowers. It is best to transplant early in the morning, water well and cover with large leaves—Burdock or Rhubarb are serviceable; or transplant after sundown, then the seedlings scarcely feel their removal. They must be watered daily, until firmly established, or oftener, if the weather is very warm.

When preparing the beds, pulverize the dirt thoroughly, and pick up all, even the smallest, stones; it is a good plan to have a box at hand in which to throw them, as well as all branches and weeds. There are many things to consider before transplanting; the general effect of the garden, which can only be tasteful if beds in masses are arranged in harmony, or in pleasing contrast. A solid square bed of scarlet Phlox is very effective when flanked by long narrow beds of Marigolds, the Meteor, or Prince of Orange varieties making a fine show when planted closely. An oval bed bordered with white Ageratum and filled in the center with bronzy foliage pink Geraniums, and a bed of the same shape at the opposite corner of the garden bordered with lavender Ageratum and the center of white Geraniums was a pretty arrangement in a flower garden of last season; of course both border and middle need occasional pruning to preserve the contour of the bed. Plan to utilize space when transplanting; border the Cannas with the little Swan River Daisy, the tall Asters with the dwarf varieties, the Calliopsis bed with the dwarf Tropæolums. A bed without a border is like a dress without a hem or finish, and there are so many low-growing plants only waiting to be made use of. One of the prettiest of them is Thrift, a hardy little perennial. If, after taking a seedling from the hot-bed, there are surplus plants, and your friends are all supplied, put them in the vegetable garden—Poppies brighten up the rows of

Potatoes and shine out among the Squash vines, and are said to drive away some insects with their odor.

Seeds may be sown in the open ground from the first to the middle of May; it is very well in the country to watch the farmers, as most seeds can safely be put in the ground at Corn-planting time, which again is, with the old-time farmer, when the bobolinks come. "I never go by the calendar or newspapers," says the best of naturalists, the hale old farmer, "now I have my seed corn in the trial pans and my ground fitted, and when I hear the bobolink laughing up in the meadow I put it in the ground." It is best to wait a week later before planting Castor Oil Beans or setting out Salvia plants. Sweet Peas should be put in the ground as soon as the frost is out; and Candytuft and Mignonette almost as soon; let the Mignonette bed be as large as possible, for it is a wealth of fragrance both for house and garden. There is an admirable bouquet plant to be had from a five-cent package of seeds which may be sown in the open ground—*Gypsophila paniculata*—it is perennial, blooming the first season, and is commonly known as "Spray," or "Infant's Breath," a dainty misty white flower, invaluable in bouquet making and equally useful to be preserved as an everlasting for winter use; there is also an annual pink variety. The Adonis is a pretty flower with finely cut foliage and a brilliant little blossom admirable for cutting with its own green setting; the blood red *A. autumnalis* is the most desirable, giving plenty of flowers when few are to be had.

There are frequently a few more seeds in a paper than one cares to sow, and there are always barren, unused spots that may be beautified with ten minutes' work. Put a cluster of sunflowers in some corner of the fence, a group of Hollyhocks where an old tree has been cut, and the stump has gone to decay. Enough cannot be said in favor of the magnificent double Hollyhocks, they are so brilliant and decorative on the lawn and so useful in the house; a large Japanese jar with two or three stalks of harmonious or suitably contrasted Hollyhocks forms a decoration not to be rivalled by any expensive arrangement of the florist.

Among the desirable things to plant are the single Dahlias; they are of the most

extensive range of color, and are effective for corsage decoration, and equally useful for bouquet making. Their abundant blooming qualities are another recommendation; for, cut as many as you will, there are always plenty to fill their places; they are easily grown from the seed, and, started early in the hot-bed and transplanted into rich soil will begin blooming in July and continue in flower until cut off by frost. The colors are brilliant, yet delicate, of every shade. The plants should be firmly tied to stakes and trimmed symmetrically.

Another pleasant bit of work for spring is to take the northern corner formed by the piazza, or an angle of the house, and make it less unsightly, for it is just the spot beloved by Ferns. Loosen the earth; if spaded quite deep there will be better drainage; and place a layer of stones—cobble stones thrown in carelessly are best—and cover with two feet of soil, mostly woods' dirt. The bed ready, bring your Ferns from the woods, choosing, if possible, a clondy day—if transplanted just before a shower they scarcely show their removal. Those growing in the dryer parts of the woods thrive better than those taken from the brooksides. One of the very best for this purpose is *Polypodium vulgare*, an evergreen variety, and for the center or back of the bed, *Pteris aquilina*; while the dainty Maiden Hair, with its delicate fronds, is pretty for the front; at the roots plant the Partridge Berry, Gold Thread, "Jill-go-over-the-ground," or any of the other numberless wood creepers. Make your bed as large as possible, and whenever you find some particularly pretty woods plant, try your luck with it in the Fern bed; there are so many moisture loving plants that accept the change readily, especially the *Cypridiums* and those of the Crowfoot family. The *Sarracenia* domesticates easily, the only especial attention necessary being an abundance of water; this the Fern bed must always have, and if frequently sprinkled it will be as fresh and green as if it grew in the midst of the woods.

Many wild flowers may be domesticated in the beds with the perennials; the prettiest border edging I know, is composed of *Hepaticas*, and, after the lovely little flowers with their delicate porcelain shades are gone, there are the beautiful three-lobed leaves of olive and green. It

is best to transplant them directly after their blooming time. *Sanguinaria*, or Bloodroot, takes readily to cultivation, and is very charming with its star-like, white flowers among the greens of the perennials. The *Dicentras*, both "Dutchman's Breeches," and "Squirrel Corn," make charming clumps in the bulb bed, blossoming with the Grape Hyacinth and the Jonquils and *Narcissi*. All the *Trilliums* may be transplanted, and Solomon's Seal and Adder-tongue.

The Violet family domesticate easily, and none better than the lovely sweet-scented white variety *Canadensis*.

Perhaps the best and most lasting return may be had from the Meadow Lily, as it endures the dryness of the garden admirably, and increases in beauty every year, while it really is more graceful and desirable than many of the imported sorts.

Do not neglect the old-fashioned border plants, or if you must put bedding plants and novelties in their places, put the Tiger Lilies back in the shrubbery, and at the farther side of the lawn the old-time crimson *Pæonies*, and clumps of Lemon Lilies, large bunches of the last, with their beautiful shade of yellow, their rich odor and light green leaves, are wonderfully bright and pretty planted in the grass or among the Evergreens.

The catalogues have a great deal to say about the hardy double Sunflower, *Helianthus multiflorus*, and it merits all the praise it receives. It blooms profusely, and its flowers remain in perfection a long time.

A large bed of mixed Canterbury Bell is a wondrous pretty sight in June, and through the season, if not allowed to go to seed, and amply repays the care and waiting.

Digitalis, with its handsomely marked flowers in graceful spikes is another showy and interesting flower which it is well worth having patience for.

The Oriental Poppy will, perhaps, attract more attention than any other flower, and is a perennial easily grown from seed.

But when the Sweet Williams with their velvety texture and sweet perfume, look brightly up out of the borders, then, if never before, the amateur comes to realize that "patient waiting is no loss."

ADA MARIE PEEK, *Waterville, N. Y.*

THOUGHTS ON SPRING FLOWERS.

March has not a good reputation among the months, yet this spring it came with lamb-like gentleness, as if to encourage all lovers of flowers in Paris to visit the flower markets and bear away Pansies, Daisies, Violets, Marguerites, and the first single Roses, which come so early only to wilt ere the sun sets. A March Rose is a French delusion. It is fair to see; it does not possess perfume; it comes from a greenhouse, where it was carefully nursed to bud and blossom merely for March. It is not intended to live or thrive in any drawing room, or even in a sunny south window.

The smaller plants in the flower market or show are laid on the ground as tastefully as are inlaid mosaic patterns in a carpet. The flower vendor is a true gardener. He seats himself by the plants, and is ready to sell reasonably; but to get these delivered is difficult, for often the price of delivery equals the outlay for plants. When Lent commences, hundreds of ladies remember the flower market as one of the sights permissible for Lent. Every morning they may be seen admiring, purchasing and carrying off floral trophies to the nearest *voiture*, where even cabby seems delighted to adorn his seat and every convenient corner of his cab with sweet spring flowers. He is warranted to comment familiarly to *Madame* upon her taste in purchasing the very flowers he had always loved.

"Winter lingers in the lap of spring," and the flowers feel the full force of the expression. They are not so far advanced as they were last season, which was unusually mild. The favored flowers now are Violets. In this era of court mourning they are extensively used for robe, dress and dinner ornamentation. At a banquet given to the Prince of Wales, at Nice, all the covers and glassware were placed upon beds or between lines of Violets. Flower-women claim that Violets are the most profitable of all flowers.

The English flower-girls in London call out, "only a penny a bunch! sweet Violets!" It is a deception, for what she sells have no perfume, and are mingled with Snowdrops or clustered around with Ivy leaves. Give a florist a sixpence for a little bunch of rare old English Violets

and the perfume clings to it when withered and dead. The Parisian florist acknowledges the Violet as a royal favorite, and claims that it will not bear the association of any other flower. Hence, the bunches are tied up loosely with their own leaves, and immense carts are seen well laden upon almost every street corner, where flower lovers are wont to pass. These may be seen at an inconveniently early hour. Their business, from appearances, yields a satisfying result, judging from the coppers which are piled in a heap in one corner of the wagon.

Yesterday morning, I saw a casket containing a little dead babe pass by, covered with white Violets. The mother, stricken by the first shadow across her life of bright promise and glorious expectation, followed, thoughtfully, with a face as sad as JOSEPHINE wore whenever she gazed upon Violets, in her later years, suggestive of her betrothal gift. It was said the very perfume would cause pain to that Empress.

New birds in the Bois de Boulogne are exchanging with the winter ones, who recently took wing to northward countries. The first of these summer residents appeared last Sunday. Frogs are awakening from their hibernation, and croak their love songs among the reeds which shoot up by the ponds and lakes.

I visited the Spring Flower Shows, each in succession, and, I think, twelve in all, and expected to see the same familiar spring flowers as during previous years, but I noticed, perhaps for the first time, that yellow flowers had become the most numerous. The yellow tinged Narcissus, named after the mythical youth, who is said to have been changed into this flower, was most prominent. Yellow crowned Daffodils, with nodding heads and soft green leaves, and the golden flower of the Coltsfoot, which appears even ere the leaves unfold, were all there. Daffodils are known as Lent Lilies, and an English tourist assures me he saw, in Staffordshire, England, a large field planted by a rich land owner so as to describe the Lord's Prayer. The incident shows how abundantly they were found.

The sketch on the next page shows a Parisian flower stand, copied from one used by a noted flower-woman in the Latin

Quarter. The Hyacinths will be sold and replaced in the style of garniture shown in the sketch many times during the day. To know the effect, imagine the blue and white single Hyacinths seeming to hang in clusters, and the pots at her feet, as she quietly awaits her well known customers, who

and Pansies, and so on, as seasons change; but no matter what flower she may offer, by this stand is her home, and she will wreath it, as she would a picture frame with flowers and blossoms.

Violets with Orchids are much used on dress occasions, and no other kind for



BABETTE, THE FLOWER-WOMAN OF LE LATIN QUARTIER.

would walk many blocks to patronize her. She has occupied this corner many years, and is likely to continue there for much time to come. To-day she had white Hyacinths; to-morrow these flowers may be yellow, and the next day in all tints. She never displays a monotony. Next month she may offer Marguerites

either the hair or for ball dresses. These usurp places where once displays of Roses formed the garniture of a robe rich and exquisitely beautiful, and blending in tone with a soft tulle or a rich silk. These did Roses once adorn as no other flower can ever hope to. Now fashion insists that stiff, uncomfortable looking

Orchids may find favor, as supposed, to get less crushed than any other flower. Orchids, also, form the knot of flowers on the shoulder, worn as an epaulette.

The Parisian florists are reaping a harvest of golden coin since the charming fashion of wearing natural flowers has again come into vogue.

Fairy grottos with large mirrors reflecting flowers and Ferns, and the corridors leading to supper-rooms are now converted into avenues of Palms and flowering plants of all descriptions by the artistic taste of these French florists. I have seen an ancient vase with the little face of a watch in the center, that ticked musically while the vase was filled with Fuchsias and Four O'clocks, unusually large, and brilliant in color. However, flowers have no season in Paris, for these are brought from every clime. Even the Holy Ghost plant, with the perfect form of the dove within, has been carefully transplanted here from the Isthmus of Panama, and made, by patient care, to bloom in the Government greenhouse.

ADA THORPE LOFTUS.

Paris, France, March 8, 1889.

LANDSCAPE GARDENING.

"Happy the man whose wish and care
A few paternal acres bound;
Content to breathe his native air
On his own ground."

Every one acknowledges the fascination and unalloyed pleasure of caring for flowers, shrubs and trees upon one's own ground. Yet how few, comparatively, are there who enjoy this single, yet complete, pleasure as they might. It is only in the smaller towns and villages, and not always there, that neat and attractive door yards are at all common.

In many parts of Europe there exists a beautiful custom of planting a tree upon the birth or name day of each child. The tree becomes the property and care of the child, and a subtle bond of attachment comes to be formed for it as the child increases in stature, and the tree in size; a bond which is not broken when the child, grown to adult age, seeks his fortune in other neighborhoods or distant climes. Go where he will, he

"Drags at each remove an ever lengthening chain."

The observance of Arbor Day should become general, and be regarded as a

national holiday. But the trees planted on Arbor Day should include flowering shrubs and ornamental and fruit trees, as well as forest trees, or trees planted for timber.

So extensive is the range of climate, soil and surroundings in our country that no general list of the "best trees" can be given for general use. There are, however, some excellent rules of general application, which should be observed by all who plant for beauty, healthfulness and pleasure. FRANK J. SCOTT, in his excellent work, *Beautiful Homes*, gives the following six rules:

1. Preserve in one or more places, according to the size and form of the yard, the greatest length of unbroken lawn that the space will admit of.

2. Plant between radiating lines from the house to the outside of the yard, so as to leave open lines of view from the principal windows and entrance porch. Leave open vistas towards any point of particular interest.

3. Plant the larger trees and shrubs farthest from the center of the lawn, so that the smaller may be seen to advantage in front of them.

4. In small yards plant no trees that attain great size.

5. In adding to groups plant near the salient points rather than in bays or openings.

6. Shrubs which rest upon the lawn should not be planted nearer than ten feet from the front fence, unless they are intended to form a continuous screen of foliage.

To these six good rules a few may be added, viz.:

7. Plant no trees of any kind within twenty-three feet of the house.

8. Plant no trees not perfectly hardy in your neighborhood.

9. Do not mix up without system trees of widely different appearance, as Magnolias and Pines.

The discriminating and tasteful tree planter will plant with a view to blending the different groups upon the lawn into one harmonious and organic whole. To accomplish this, due attention must be paid to the habit and physiognomy of trees. ALEXANDER VON HUMBOLDT, among his many achievements, outlined a scheme for creating the science of physiognomical botany. HUMBOLDT

groups all vegetation under nineteen forms. viz.: Those of the Palm, Banana, Orchid, Melastoma, Casuarina, Mimosa, Malva, Lily, Cactus, Aloe, Arum, Willow, Heath, Pine, Myrtle, Laurel, Vine, Grass, Fern. Concerning these groups, HUMBOLDT says:

"It would be an undertaking worthy of a great artist to study the character of all these vegetable groups, not from the descriptions of botanists, but in the grand theater of nature. How interesting would be a work that should present to the eye the nineteen principal forms enumerated, both individually and in collective contrast."

In planting a small lawn the planter should endeavor to confine himself to two or three of these typical forms. This does not mean confining himself to two or three species. Each one of the groups enumerated contains over one thousand species, and affords ample scope for exercising the most exacting taste. Plant with liberality and discrimination. Plant trees, shrubs and herbaceous flowers. Plant for youthful enjoyment, and as a specific against the encroachments of old age. As we advance in the vale of years let us, with the Scottish poet, sing,

"Leaf, blossom, blade, hill, valley, streams,
The pure, unbounded sky,
Still mingle music with our dreams,
As in the days gone by."

GERALD MCCARTHY.

BULBS AND ECONOMY.

We live three miles from the center of the town, and when I go shopping I always procure a lunch, but as I never had money enough to buy all the bulbs I wanted, and as Hyacinths are my delight, I was determined to exercise a little closer economy with my lunch, and what I might save in that way to let go for bulbs. All through October I enjoyed going into the florist's and buying a bulb or two. Here, in Detroit, you can buy them for eight or ten cents each. I go to the box and choose the heaviest, weighing it in my hand, and go joyfully home and put my bulb into a pot and safely deposit it in a dark closet under the stairs. Now, instead of the money going in fancy lunches, and perhaps disarranging my stomach, with nothing to show for it, I have twelve Hyacinths, three Freesias, six Jonquils and four Tulips. The

last of January I began to bring them out of the closet, and the lovely things put forth their sweet buds right away. I do not believe there is any one, however slender her purse, but can buy at least a few bulbs and enliven the dreary waiting for spring.

SISTER GRACIOUS.

SONG AND SHADE.

He whose exalted thoughts on death,*
Wherever read,
Breathe comfort sweet as is the breath
Of flowers, 'tis said,
Oft, with his own hand, planted trees
Beside the way;
Trees which the weary traveler sees
With joy, to-day.

Those hands are folded now in rest,
Their work all o'er;
At fancy's voice or love's behest
They move no more.
But still his song sublime we sing,
Our hearts to cheer;
Death robbing thus of half its sting—
Faith conquering fear.

And men who ne'er have read a word
That he hath penned;
Nor e'en the poet's name have heard,
Do thank the friend,
To them unknown, whose deed bestowed
Such kindly aid;
Who set beside the dusty road
A grateful shade.

PHILIP BURROUGHS STRONG, *Malone, N. Y.*

* BRYANT'S "Thanatopsis."

PETS AND PLANTS.

VICK'S MAGAZINE is one of the most welcome of the many publications that come to our table, not that it treats of our specialty, poultry and pets, but because we, like nearly every one in this "summer-land," are interested in flowers.

It is but a step from pets to plants, and the fancier of one is easily beguiled into the fancy of the other when opportunity offers. Here, in California, where flowers grow so profusely and with so little care, there is no excuse for a lack of them wherever a few yards of mother earth are exposed to sun and air. Even the divisions of our poultry yards and the cages of our birds may be covered with Roses, bringing comfort to our feathered pets and pleasure to the eye.

This reminds us that, in our experience, there is no fertilizer so well adapted to Roses as that obtained from the roosts of the poultry and the cages of birds. Even on our rich sediment soil, that will

produce wonderful growths of tree and vine, and such luscious fruit, the application of poultry manure liberally about the Roses produces wonderful results.

We, therefore welcome your MAGAZINE with the peculiar interest of one who has spent years in the greenhouses and gardens of a northern State, and while engaged in the somewhat different, yet nearly related, pursuits of fruit growing and poultry raising, still have a place for flowers and plants.

H. G. KEESLING, Ed. *Cackler, San Jose.*

FLOWERS FOR THE BRAVE.

Here bring your purple and gold,
Glory of color and scent;
Scarlet of Tulips bold,
Buds blue as the firmament.

Hushed is the sound of the fife
And the bugle piping clear,
The vivid and delicate life
In the soul of the peaceful year

We bring to the quiet dead,
With a gentle and tempered grief;
O'er the mounds so mute we shed
The beauty of blossom and leaf.

The flashing swords that were drawn,
No rust shall their fame destroy!
Boughs rosy as rifts of dawn,
Like the blush on the cheek of joy.

Rich fires of the gardens and meads
We kindle, these hearts above!
What splendor can match their deeds?
What sweetness can match our love?

CELIA THAXTER.

SOME DAINY ANNUALS.

I wish to say a word for those wee, modest blossoms, whose very delicacy of tint, or aerial grace of form, charms greatly appreciated by people of refinement, have often led to their being hidden or overlooked amid showier flowers.

Peru and Brazil have sent us the *Browallia*, a plant seemingly unfit to cope with their burning suns, although one of its chief recommendations is that it is one of the few blue bedding plants which bear the sun well, its delicacy being deceptive. It is a profuse bloomer, and compact, though graceful, in habit, its blue being a light, fresh shade, unobtrusive, and cooling to look at. There are white and rose-colored varieties, but the blue is the most preferable. When frosts come, the sturdy little, half-hardy plants may be taken into the house, and will bloom half the winter.

The *Gypsophilas* are indispensable to those who plume themselves upon their skill as bouquet makers; their delicate sprays of feathery, moss-like green, jeweled with tiny pink or white stars, lending an inimitable grace to any bouquet, vase or basket arrangement. It is an independent little blossom, notwithstanding its fragile structure, even seeding for itself and coming up in dense patches of green in late fall, early spring, or under the protection of dead lawn plants in winter. It transplants quite contentedly, and needs but little water, and quickly flings its mist-like tracery of light green sprays over any unsightly object or mound in a most loving and charitable manner. The shears will keep it in a dense, compact mass, as a border plant, and retaining its color when dried is thus useful for mingling with winter decorations. *Gypsophila paniculata* is a perennial with white flowers, very fine for cutting.

Myosotis is, perhaps, more properly a perennial, but it blooms the first year after sowing, and, aside association, has much loveliness of form and coloring. In Germany the pink and blue varieties are grown together in pots, and the two shades blend into a rarely beautiful combination. It delights in moist, shaded places, and often takes root and grows when placed in vases of water. There are, perhaps, a dozen shades and varieties, but *M. alpestris* and *M. alpestris rosea* are my favorites, and I hope they will never be "improved" out of all their original loveliness.

I am not quite sure that our wild *Mimosa* is the *Mimosa Indica* of the catalogues, but it is certainly a near relation, and a valuable acquisition to any flower garden. It sends out long arms, often two yards in length, with delicate, fern-like leaves, which close upon being touched ever so lightly—such a time as I had trying to press some for an herbarium—but leaves and branches bear nettle-like stings, which do not enhance the pleasure of transplanting. But the blossoms, oh, the darling, fragrant little balls, delicate pink in color, their velvety surface powdered with the golden pollen of the stamens, and their perfume sweet and subtle. The flowers are borne in clusters of eight or more, at the end of branchlets, and these break thickly from the long

arms. Its fragrance so rich and distinctive, well deserves the attention of perfume makers.

One other, an airy, climbing vine, the *Ipomœa Quamoclit*, or Cypress Vine. Plant it once where more vigorous vines will not run over it, near an old rock wall, a greystone gateway, cross or pillar, where its gleaming scarlet flowers can sway against a cool, gray background, and its clear cut foliage show to advantage, and you will never more be without it, for aside from being a feast to the eye, it blooms, seeds and grows quite freely.

The growing taste for flowers more quiet in tone has led me to hope that these deserving ones will soon be nestled in many other hearts and gardens.

LENNIE GREENLEE.

AMARYLLIS—FREESIAS.

We have an *Amaryllis* which corresponds with J. E. H.'s description in the February *MAGAZINE*, page 50, which is called Grass Lily here. We used to keep it growing all of the time, and it bloomed occasionally. When they increased, we stored the bulbs in the cellar, and they did not blossom as well; but one autumn, in our hurry, we hung them in the ante-room of our conservatory, about two yards from the stove, and they began to show buds in February. We now plant a few at a time, and have blossoms right along, but no green leaves—they come later. Have five now sitting on our table. Will send bulb for name.

How should *Freesias* be kept during summer?

MRS. N. E. F., *Prospect, Wis.*

It is as well to leave the *Amaryllis* bulbs in the pots after blooming, and after the leaves have died off and until they are ready to start again.

Freesias that have bloomed in winter and spring can be placed outside during summer, plunging the pots they are in below their rims in the soil, so that more or less water can have access to them. Lift the latter part of August or early in September, and repot the bulbs, and take them to the house.

THE DARK RED LILY.

The Lily of which a plate is given in this number; *Lilium elegans atrosanguineum*, is a robust, healthy species, and very satisfactory for the garden. It belongs to the orange-red Lily group, of which our common wild Lily, *L. Philadelphicum*, is a type. This variety is a native of Japan. It is a sturdy, compact grower, throwing up its flowers to a height of about thirty inches. As may be seen by the small drawing at the side of

the plate, the flowers are borne in large clusters. With us the plants come into bloom from the last of June to the middle of July, according to the condition of the season, and continue a long time in flower. The bulbs increase rapidly and are not subject to disease. *L. elegans grandiflorum*, or, as it is otherwise called, *L. Thunbergianum grandiflorum*, is a plant of similar habit, but of a somewhat darker and more solid red. They are both valuable plants for the hardy border.

MAGNOLIA SEED.

I have just received, from California, some *Magnolia* seed. Would you kindly tell me, through your *MAGAZINE*, what kind of soil to use in planting them, and what kind of treatment to give after they have come up.

J. B. B., *Hodgdon, Maine.*

Any good soil is suitable to start *Magnolia* seeds in. These seeds are somewhat difficult to germinate if they have been allowed to become dry. If it is necessary to keep them before planting, they should be mixed with sand as soon as gathered, and in this manner kept moist until ready to plant.

A SONG FOR MAY.

A song for May, whose breath is sweet
With blossoms glowing at our feet;
Her voice is heard in laughing rills
That ripple down the sunny hills,
O, happy, happy May.

The robin in the Cherry tree
Is blithe as any bird can be;
And bubbling from his silver throat,
His wordless songs of rapture float.
O, happy, happy May.

Above the hills the firmament
Bends down about us like a tent,
And we, O, fairy-footed May,
Are dwellers in your tents, to-day.
O, happy, happy May.

Our hearts are glad with bird and bee
For what we feel and what we see;
O, would that life and love, we say,
Might always keep its happy May,
Its happy, happy May.

EBEN E. REXFORD.

A FINE CALLA.

I have a *Calla* Lily a description of which might be of interest. This Lily is about eleven years old. It has produced five blooms this winter. It now has eight leaves and two blossoms just unfolding into bloom. One of the largest leaves measures four feet in length including stem, the leaf proper fifteen inches long and eleven inches wide. Four or five of

the leaves are near this size. But the strangest thing is that it has borne twin blossoms, that is, two blooms from the the same leaf, although not at the same time. The first bloom had faded when just between the old flower stem and the leaf appeared a new flower stem of full size, which is now unfolding a full sized flower. It has, at this time, two flowers just unfolding into bloom. I measured one of the flowers, this winter. It measured seven inches in length and nearly the same in width. One of its blossoms, last winter, measured somewhat more than this. I have examined many Lilies exhibited by florists in Cincinnati, but have never seen any that would begin to compare with this for size of leaf and blossom. We keep this Lily dormant during summer.

W. E. W., *Guilford, Ind.*

ROSE-BIRTH.

In their liquid life's beginning,
In the sap of upward flow,
Summer Roses now are forming
Plans for coming into blow.
By and by, when fed with sunshine,
Warmer days will give a start
To each undeveloped blossom
Hidden in the bush's heart.
Fragrant beauty, pale or sanguine,
As the germ may have its bent,
With enchanting wealth of sweetness
In this rising flow is sent.
We should bless the dear old winter,
That it spares the roots below,
Shielding from the cruel frost-fiend
With a coverlet of snow.

T. H. L.

ARBOR DAY.

Our modern institution—Arbor Day—is a public acknowledgement of our dependence upon the soil of the earth for our daily—our annual—bread. In recognition of the same fact the Emperor of China annually plows a furrow with his own hand, and in the same significance are the provisions in the ancient law of MOSES, to give the land its seven-year Sabbath, as well as to man his seventh day for rest and recreation. Our observance is a better one, because it calls on all, and especially on the impressive learners in the schools to join in the duty which we owe to the earth and to all mankind, of doing what each of us can to preserve the soil's fertility, and to prevent, as long as possible, the earth from which we have our being, from be-

coming worn out and wholly bald and bare. And we do this by planting of any sort, if only by making two blades of grass grow where but one grew before, and by learning to preserve vegetation. We give solemnity to this observance by joining in it on an appointed day, high and low, old and young, together.

W.

SPRAYING THE FRUIT TREES.

Prepare for spraying the orchards.

If you have a force pump, see that it is in order. Have you a cask ready, and will it hold water?

If a new pump and cask must be purchased, don't put it off.

Have everything ready before the trees bloom.

One pound of London Purple or Paris Green to two hundred gallons of water.

Spray just after the flowers drop, and again after two weeks.

Try it in the same way on the Plum trees.

Be sure to have a nozzle that will throw a fine spray. This will make the spraying more thorough, reaching every part of the foliage, and at the same time it will save water, and this in effect is saving time, which is money. The best nozzle is the cheapest.

The black aphid on the Apple, if it should appear, can be conquered with the kerosene emulsion in water, applied with force pumps in manner described in March number of this MAGAZINE.

Prepare the emulsion and have it ready for use. It will be too late to do it after the aphid comes. If he should not come it will be wanted for something else.

WORK IN THE GARDEN.

Push the work, and seed and plant early.

Have on hand all materials to fight insects, either in the flower garden, kitchen garden, orchard or vineyard.

Don't try to raise a crop on poor soil; it won't pay. If you can get well rotted stable manure you can depend upon it. In default of a sufficiency of it, use the best commercial fertilizers you can get. For the early crops especially, nitrate of soda will be found valuable.

Frequent stirring of the soil is one of the best manures.

OUR YOUNG PEOPLE.

A MAN-TRAP.

"You have often wondered," said Hugh Lawrence to his mother, "who is to occupy the fine vacant dwelling and office next to us."

"Yes, and very naturally," she nervously interrupted. "The premises being right against us, we cannot help having a personal interest in the matter. But, happily, the property is so valuable that really inferior people are not likely to get possession of it. So I'll not worry."

Hugh looked at his father significantly.

"Well, my dear," said the latter, "the place is already purchased, and the office is being furnished and fitted up to-night, late as it is. Hugh and I just saw several men at work there, like beavers, and as still as so many mice."

"How singular, to be moving in so late at night. But probably its another doctor, and he may be too busy to oversee the handling of his precious stock by daylight. But, of what am I thinking? Of course, you know whom it is; why do you not tell me?"

"You've given me no chance, my dear. Do you remember that brawny Irish scullion-girl that worked for your mother during my first visits to you—the one that hid at the end of the piazza, one evening, to hear our talk, and who, feeling some crawling thing under her, screamed, 'murther,' and 'St. Patrick,' all in a breath, to our own great dismay. You remember her?"

"I couldn't well forget her after that; the great, brazen, curious thing! And is it possible that *she* is to be employed next door? She'll be sure to presume on old acquaintance, and make herself odious. I shall tell our 'girls' not to speak to her."

"But, my dear, you are too fast. She is to be mistress over there, not maid. It is her husband who has bought the property—making the first payment all in gold—and is now establishing a fancy saloon in the old office. You ought to see the artistic sign tilted this moment beside the door, and the —."

Further words were arrested by a gasp from Mrs. Lawrence, and an ominous throwing up of the hands, expressive of horror and indignation too intense for utterance. Upon recovering breath and speech, she exclaimed, excitedly:

"We'll have to leave this house immediately. We can't live here. Our home is ruined."

"Well, dear, don't let's go till morning," said her husband. "We knew, Hugh and I, that you'd take it very hard, and dreaded to tell you. But you had to know it. Now you can sleep on it to help dull its first offensiveness."

"O, what logic! I shall lie awake on it. I was reading, to-day, that there's very little difference between a lunatic and a *saloonatic*; and who wants a bedlam of that kind next door?"

"But this man claims he is going to keep a very quiet 'gintale' place."

"Yes, and he is so ashamed of his traffic, in this vicinity, that he moves his barrels and casks and glassware under cover of darkness. But have you no feeling on the subject, my dear? One might suppose not."

"I most certainly have; and that, too, quite apart from the fact that this property is reduced in value at least one-third by the close proximity of that nuisance."

"Father," inquired Hugh, "how did such a man get the money to buy that place? Did he inherit it from the old country?"

"No, indeed. He got it by making drunkards, or by putting men and boys in the way of becoming such. If any escaped such a fate it is not his fault. I've learned his history. He knows how to concoct his drams so as to create an unquenchable thirst for more. In his greed for money he has gathered in the last penny from poor wretches whom he knew had sick wives, and children suffering for necessities. There's a whiskey den in the lower part of the town, called the 'Shades of Death.' I learn that this

fellow once owned that place. I remember passing there, one evening, when a large, fine looking, well dressed man was being dragged out of the door in a most brutal manner. He was helplessly intoxicated. Before I could reach him his bare head struck heavily on each step, and then lay on the curbing with face upward and mouth open—a most sickening sight. As I hurried on to send a patrol wagon for him, I could but think of the early promise of Charles Lansing's gifts and position, as compared with such degradation."

"You don't mean to say," cried Lois, "that that man was Clara Lansing's father."

"The very same. A drop of liquor is as fire in his veins, so that after one taste he can never stop until as senseless and helpless as a log. A promise had been extorted from every beer hole in town to sell him nothing; but at that vile place he could always get what he wanted as long as he could pay for it. His relatives kept him well clothed, but, of course, gave him no money. No wonder his wife felt driven to get a divorce. Poor wife, poor daughter."

"And do you think, papa, that our new neigh—that the saloonist now moving in, is the man who dragged Clara's father out to lie on the ground all night? Do you?"

"I don't know, daughter, who owned the Shades of Death at that time. It may not have been this fellow, though I learn that he commenced his business in one of the vilest holes of a city, a dive, and worked his way into better quarters as fast as his profits permitted, until here he is next to us, where his customers may choose between a fine front entrance or one more private from the alley. That alley has probably been the chief attraction of this especial property. Other places, equally desirable, might not be for sale. But there is the door-bell. Who can be coming at such a late hour?"

Very soon, Hugh ushered in the Colonel and Mrs. Drayton. The latter was too excited to "be seated." "Do you know," said she, in a half whisper, "that the doctor's office, right next to us, is being fitted up for a saloon?"

"We are thinking and talking of nothing else," was dolefully answered. "Isn't it dreadful?"

"But *you*," rejoined Mrs. Drayton, have at least a few inches of yard space and the width of their dwelling between you and *it*, while we have only the alley between us. I declare, Mrs. Lawrence, if there is anything that can make our class of women wish for a controlling influence in municipal affairs, it is the prevalence of this and other social vices in our midst." Then, turning to Mr. Lawrence, and settling into a seat, she continued:

"My husband says we shall never have the benefit of the 'local option' law until we do more earnest temperance work here—systematic work, canvassing the wards by a committee appointed for each, etc."

This opened a discussion which ended with the forming of plans that should certainly increase the temperance element to a voting majority of the citizens. And when the friends parted, the hour was no longer late but very early, though the excited brother and sister were still as wide awake as owls.

When Mrs. Pat. McGlynn was once comfortably settled, she began to lift her aggressive nose and snuff the air from her neighbors' premises, always on the alert for some recognition of her importance. But finding that no one ever seemed to see her, or to hear her "Good morronin' to ye's," she felt her importance snubbed, and vowed vengeance.

Tales were already afloat of the devices by which one and another of the youths and young men had been decoyed into the man-trap by tempting displays of cigarettes and bon-bons, until, finally, they had been trapped into swallowing one of the thirst-provoking drinks, after which, in most cases, the conquest was easy. Mrs. McGlynn often found excuse to enter the back way when they were well warmed up, to blarney them after her own fashion, thus:

"Ye's do well to show ye kin carry yersilves loike min, an' tak a dhrap or lave it alone. But there be wan young gentlemine, not fur away, that holds 'imself too hoigh fur the loikes of ye's. Och, but he be a dainty, dilikit, hoigh steppin' spalpane, he be. Ye'll niver git him to tak a frindly drink wid ye; now moind!"

In course of time many revelations were made by Mrs. Drayton's cook and

housemaid, who, from the backyard, could hear nightly conversations and arguments between McGlynn's patrons halting in the alley. One evening these girls excitedly persuaded Mrs. Drayton to go out with them for a moment. A lot of young fellows had dragged a fiercely resisting youth from the street, who was trying in vain to tear a gag from his mouth. Once he found voice enough to say, in smothered tones, "See here, boys, you'll be sorry for this;" and again, he said, "Boys, if you weren't half tipsy you wouldn't —," and then the stifled voice was lost again, and, in the midst of a silent though violent struggle, the whole party disappeared through the entrance gate of the high fence that partially screened McGlynn's back premises from view. At this juncture Mrs. McGlynn called out from the side porch, "It's a bit of foon ye're havin' this avenin'," and well pleased, she retired within.

Mrs. Drayton, trembling from head to foot, suddenly started for the street, calling her girls for company, and in a moment thereafter was exclaiming to Mrs. Lawrence, "O, what a sad pity that our husbands must be away until that one o'clock train!" and then recounted what she had just seen and heard, asking if Hugh couldn't hurry to police headquarters for help, before that poor boy should be victimized, and learned, with dismay, that Hugh would not return from his "commercial writing class" for at least a half hour yet. Lois, listening to all, with big, frightened eyes, asked if those fellows were going to kill that boy, and was told that they were going to force whiskey into him until they made him drunk.

"O, dear, O, dear, what can we do?" moaned Mrs. Drayton, as she hurried away. But, quickly deciding, she kept her girls with her, and went directly for policemen herself.

But McGlynn, from long experience, had become wary; and as soon as the gurgling, strangling process of filling up the evening's victim was ended, the poor boy was carried into McGlynn's bedroom, already too dizzy and stupid to resist. So the guardians of public morals and order found nothing at McGlynn's against which to protest, but were handsomely "treated" instead, and left there feeling grateful to Mrs. Drayton for her "groundless suspicions." Mrs. Lawrence,

in the meanwhile, being a timid, shrinking woman, was awaiting Hugh's return, often bemoaning that some poor mother's heart was to be broken that night, while Lois suggested, sadly, "And some poor sister's heart broken, too, perhaps," adding, "I'm thankful it's not my brother!"

But the hours sped on, and at fifteen minutes past one, as the two absent men, with hurrying steps, had reached Mr. Lawrence's dwelling, the latter stumbled over a prostrate form lying against his steps. "Here's somebody in a sad plight," he said, "either sick or worse." At that moment the door was thrown open, and Mrs. Lawrence exclaimed: "Thank Goodness, you've come at last!" and the weeping Lois cried out, "O, papa, Hugh cannot be found in this town. The policemen say that the writing class dispersed very early last evening, Hugh with them, and that's all that any body knows of him."

"Good God, daughter, bring a light out here, quickly!"

In another moment the purple, bloated face of the prostrate form was recognized as that of Hugh Lawrence.

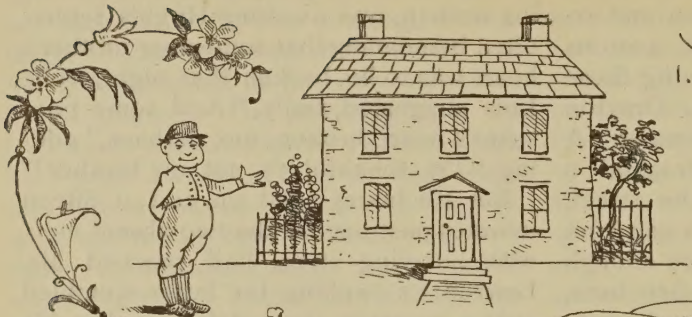
An agonized groan, the crash of a fallen lamp, a staggering step backward, and then the stricken father rallied, and, assisted by his friend, bore the sad burden within, amid the tears and bemoanings of wife and daughter. Colonel Drayton, appalled at the fatal significance of the stertorous breathing of the poor boy, hastened for a physician, and returning, called for his wife, and the two remained with the distressed family long after the words had been pronounced which converted the home—so happy but a few hours before—into one of bitterest sorrow and endless distress.

"An extreme case of alcoholic poisoning. He cannot live."

These words ringing through the town, next morning, soon followed by news of the crisis, proved an incentive to investigation that kept Mrs. McGlynn quaking in her shoes for weeks, and so horrified the actors in the frightful tragedy that no more earnest temperance workers than they were found among those whose influence soon banished all saloons from their midst. But no efforts, no sorrow, no remorse could again restore Hugh Lawrence to his family and home.

MARIA BARRETT BUTLER.

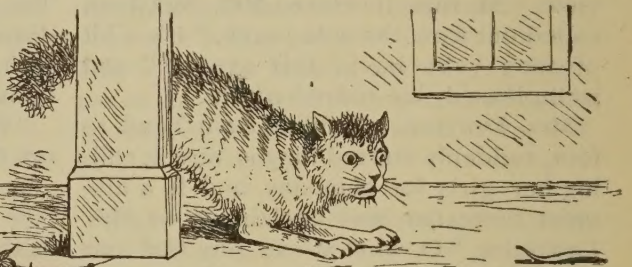
THE DOMICIL ERECTED BY JOHN.
Translated from the Vulgate of M. Goös.



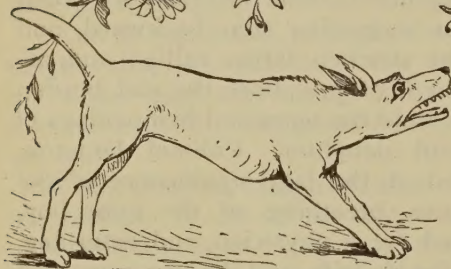
I. Behold the Mansion,
reared by doidal Jack!



II. See here the malt—
stored in many a plethoric sack,
In the proud cirque of Ivan's bivouac.



III. Mark, how the rat's felonious
fangs invade
The golden stores, in John's pavilion
laid.



IV. Anon with velvet foot and tarquin strides,
Suttle grimalkin to his quarry glides;
Grimalkin grim, that slew the fierce rodent,
Whose fangs insidious Johan's sackcloth rent.

V. Io! now the deep mouthed canine foe's assault,
That vex'd the avenger of the stolen malt,
Stored in the hallowed precincts of that hall
That rose complete at Jack's creative call.



VI. Here stalks the cow with the crumpled horn,
Whereon the exacerbating brute was torn—
Who bayed the feline slaughter beast;
that slew
The rat predacious; whose keen fangs
ran through
The textile fibres, that involved the grain
Which lay in Han's inviolate domain.



VII. Here walks forlorn the damsel, crown'd with rue,



Lactiferous spoils from vaccine dugs who drew
Of that corniculate beast; whose tortuous horn
Tossed to the clouds, in fierce, vindictive scorn
The harrying hound; whose braggart bark and stir—

Arched the lithe spine, and raised the indignant fur
 Of Puss, that with verminicidal claw
 Struck the wierd rat, in whose insatiate maw
 Lay reeking malt, that erst in Ivan's court we gaw.

VIII. Robed in senescent garb, that seems forsooth
 Too long a prey to Chrono's iron tooth,
 Behold the man, whose amorous lips incline
 Full with young Ero's osculative sign
 To the lorn maiden; whose lac-albic hands
 Drew albu-lactic wealth from lacteal glands—
 Of that immortal bovine, by whose horns
 Distort, to realms ethereal was borne
 The beast catulean, vexer of that sly
 Ulysses quadrupedal, who made die
 The old mordacious rat, that dared devour
 Antecedaneous ale, in John's domestic bower

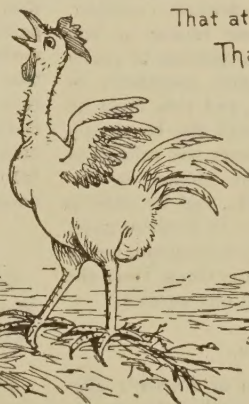
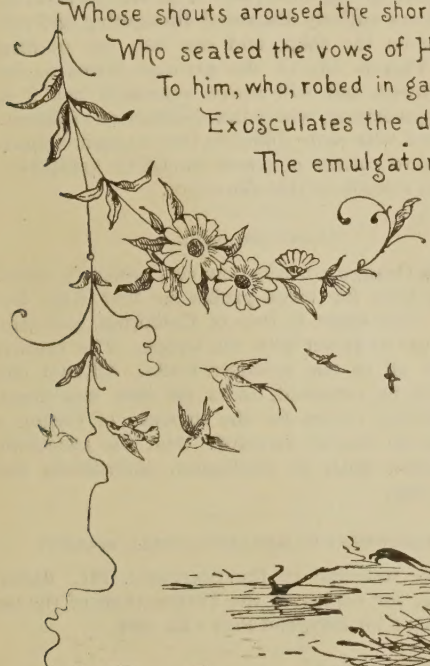


IX. Lo! here, with hirsute honors doffed, succint
 Of saponaceous locks, the Priest; who linked
 In hymen's golden band the torn unthrift,
 Whose means exigent, stared from many a rift,
 Even as he kissed the virgin all forlorn,
 Who milked the cow with the implicated horn,
 Who in fine wrath, the canine torturer skied,
 That dared to vex the insidious musicide,
 Who let auroral effluence through the pelt
 Of the sly rat, that robbed the Palace Jack had
 built.

X. The loud cantankerous Shanghai comes at last,
 Whose shouts aroused the shorn ecclesiast,
 Who sealed the vows of Hymen's sacrament
 To him, who, robed in garments indigent,
 Exosculates the damsel lachrymose,
 The emulgator of that horned brute morose,
 That tossed the dog.

That worried the cat,
 That killed the rat,
 That ate the malt,
 That lay in the house
 That Jack built

Illustrated by
 Uncle Jon.



EDITOR'S MISCELLANY.

PEACH YELLOWS.

Peach Yellows: A Preliminary Report, by Erwin F. Smith, B. Sc.

This is the title of Bulletin No. 9, of the Section of Vegetable Pathology of the Botanical Division of the Department of Agriculture.

It is a splendid contribution to the literature of this subject, and the patient investigation which Mr. Smith is giving this subject can hardly fail, in due time, to lead to valuable results. For a hundred years or more, as is shown in this report, the disease has been known, and yet the cause and the remedy have eluded the practical Peach grower. The Report embraces over two hundred and fifty pages of text, thirty-seven lithograph plates, of which seven are chromo lithographs, besides nine charts and maps. The writer says: "Some experiments have been completed, some are now under way, and some remain to be performed. Much additional field work and a large body of very important microscopic work remain to be done before definite conclusions can be reached as to the cause of the disease."

As to conclusions of the cause of yellows, Mr. Smith has this to say: "From what precedes, we are reasonably safe in concluding that yellows is not due to climatic influences. Frosts, floods and drouths may be modifying influences, but are nothing more. Injuries by men, quadrupeds and borers may also be included in the list of disproved theories. They stand in no causal relation to the disease. To the same category may be added excessive cultivation, neglect of cultivation, and neglect of pruning. So, also, injury to tap-roots, propagation by buds rather than by seeds, defective drainage, use of animal manures, etc. Some of these things may favor the development of peach yellows but I think none of them can cause it. The evidence here set forth seems to establish this beyond reasonable doubt. Probably most of my readers will be ready to admit that soil exhaustion is also an unsatisfactory explanation. As the case now stands this theory must be set aside as untenable. At least, we need give it no further attention until more and stronger evidence is adduced in its favor. I write this with regret, for I hoped to be able to confirm this view, as it would have offered an easy and practical solution of the whole difficulty."

Among supposed causes, to which further attention will be given, are root aphides and root fungi, though from the facts already learned it is improbable that they are the cause of the disease.

"The spread of yellows from diseased buds to healthy stocks, which I have carefully verified, points strongly to some *contagium vivum* as the cause of the disease. If a micro-organism be really the cause, it probably occurs quite constantly in some parts of each diseased tree, and this must be established beyond question; it must also be clearly distinguished from similar organisms not related to the disease; and, finally, it must be isolated by cultivation in suitable nutritive media, and be able to produce the disease when inserted in healthy trees. If from a pure culture of some micro-organism peach yellows can be induced in healthy trees, then the case is closed and there can be but one verdict."

COLLEGE BOTANY.

The demand for a new edition of *Bastin's Elements of Botany* has induced the author "to supply its place with two books, one especially suited to the

use of colleges and of schools of pharmacy and medicine, and the other, a briefer and more elementary work, adapted to the use of high schools and academies."

The *College Botany*, which we have had the pleasure of examining, appears to be admirably adapted to the use it is intended for. It commences the study in a very simple and natural manner, considering successively and in detail the different parts of the higher plants, and leaving the consideration of the fundamental tissues and cryptogamous plants and vegetable physiology until a later period of the study. The whole subject is, however, very thoroughly treated in all its aspects, and with especial reference to the complete understanding of the student and familiarizing him with practical work. The "Practical Exercises" for the student to follow out are very complete, and we believe that for careful and comprehensive treatment of the subject within the compass of a single volume this work has no compeer. It is a fine specimen of typography and book-making altogether. It is exceedingly well illustrated. It is an octavo of 450 pages. The author is Edson S. Bastin, A. M., Professor of Botany and Materia Medica and Microscopy in the Chicago College of Pharmacy. Published by G. P. Engelhard and Company, Chicago, Illinois.

THE WORLD MOVES,

And as evidence of it, we can make the statement to our readers that the disagreeable process of fumigation in plant houses to destroy green-fly, is now no longer necessary. A substance called sulphotobacco soap has been prepared, which has now been under trial for more than a year, and has proved effectual for the destruction of green-fly, thrips, red spider, mealy bug, and other insects. Some who have tried it claim it to be a complete destroyer of the currant worm, rose bug and the elm insect. For ourselves, we have made the trial in our own greenhouses, and it proves so valuable that we have entirely discarded fumigating and rely wholly upon the soap, and can ask for nothing better. This is one of the greatest boons to the plant grower, and will prove especially useful in window gardening, where the destruction of insects is attended with more difficulty than in plant houses. The window culture of plants should be greatly extended as a result of this discovery.

FRUIT GROWING.

Florida Orange growers now very generally admit that the time for large profits in that fruit has passed. The same is true of California, not only with Citrus fruits but with the Grape. The same is true with all of our northern fruits. All that can reasonably be expected, under the best conditions, is a moderate return for the expense of raising a crop and the capital invested. And the successful fruit grower must be intelligent, industrious and enterprising.

MASSACHUSETTS HORTICULTURAL SOCIETY

We are indebted to the Secretary, Mr. Robert Manning, for copies of the Transactions of the Society, Part 2 for 1887, and Part 1 for 1888.

THE ECLECTIC MAGAZINE.—This excellent monthly contains the cream of current literature. Published by E. R. Pelton, New York.